



U.S. ENVIRONMENTAL PROTECTION AGENCY
 Office of Pesticide Programs
 Antimicrobials Division (7510P)
 1200 Pennsylvania Ave., N.W.
 Washington, D.C. 20460

EPA Reg. Number:

9150-16

Date of Issuance:

1/3/18

NOTICE OF PESTICIDE:

Registration
 Reregistration
 (under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

PurDox BCD

Name and Address of Registrant (include ZIP Code):

Christina M. Swick
 International Dioxide
 40 Whitecap Drive
 North Kingstown, RI 02852

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Demson Fuller, Product Manager 32
 Regulatory Management Branch II
 Antimicrobials Division (7510P)

Date:

1/3/18

2. You are required to comply with the data requirements described in the DCI identified below:
 - a. Inorganic Chlorates GDCI-073301-1624

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Reevaluation Team Leader (Team 36): <http://www2.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobial-division>

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.
4. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 9150-16.”
5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 08/11/2017

If you have any questions, please contact Melanie Bolden by phone at (703) 347-0165, or via email at Bolden.Melanie@epa.gov.

Sincerely,



Demson Fuller, Product Manager 32
Regulatory Management Branch II
Antimicrobials Division (7510P)
Office of Pesticide Programs

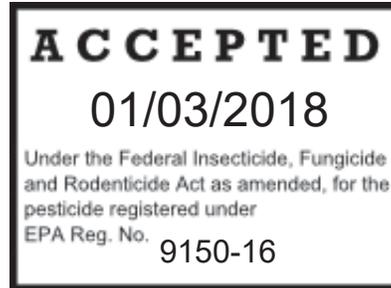
Enclosure

Notes to reviewer: TEXT IN [BRACKETS] IS OPTIONAL
TEXT IN {BRACES} ARE COMMENTS TO REVIEWER
Alternate Brand Name:

PurDOX™ BCD

PRECURSOR FOR CHLORINE DIOXIDE SOLUTIONS
FOR INDUSTRIAL USE

Active Ingredients
Sodium Chlorate (NaClO3)-----40%
Other Ingredients -----60%
Total: 100%



**KEEP OUT OF REACH OF CHILDREN
DANGER / PELIGRO**

[See Side Panels for Additional Precautionary Statements]
[See leaflet for additional directions for use]

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If swallowed: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

For Transport Emergency: CHEMTREC: (800) 424-9300 (outside the U.S. (703) 527-3887). For Emergencies, including Medical: (800) 410-3063. For Product Information: (800) 477-6071 (outside the U.S. (401) 295-8800).

EPA Reg. No. 9150-RA
EPA Est. No. XXXXXX-YYY-ZZZ

NET CONTENTS: _____ GAL.

[Manufacturing Date:]
[Born on Date:]

Notes to reviewer: TEXT IN [BRACKETS] IS OPTIONAL
TEXT IN {BRACES} ARE COMMENTS TO REVIEWER
Alternate Brand Name:

[Lot Number:]

Manufactured For:
INTERNATIONAL DIOXIDE, INC.
40 Whitecap Drive
North Kingstown, RI 02852

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMAN AND DOMESTIC ANIMALS

Danger. Corrosive. Causes irreversible eye damage. Harmful if absorbed through the skin or inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield. When contact is likely, wear a PVC or rubber rain suit and wash down rain suit after each use. Wear protective gloves, plastic or rubber. Wear plastic or rubber safety toed boots. Leather and cloth impregnated with sodium chlorate are highly flammable and easily ignited with minor friction. Remove and wash contaminated clothing before re-use. Do not allow contaminated clothing to dry before washing clothing on-site. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

CHEMICAL HAZARDS

PurDOX™ BCD is a strong oxidizing agent. Do not contaminate with dirt, oils or organic matter of any sort. Contamination may cause violent chemical reactions, fire and explosion. Clean up all chemical spills immediately. Allowing spills to dry or concentrate may cause spontaneous combustion. In case of chemical spills, avoid bodily contact and wear appropriate protective equipment.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Change clothing when contaminated and wash on-site. Do not allow contaminated clothing to dry before washing clothing on-site. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. User must remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Do not allow contaminated clothing to dry before washing clothing on-site. User must remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

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STORAGE AND DISPOSAL**DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL**

PESTICIDE STORAGE: Store in the original container. Store at ambient temperatures from 40°F to 100°F. Store separately from sulfuric acid precursor and all other acids. Store in fire-resistant area separate from incompatible materials such as acids, powdered metals, organic chemicals, combustible materials and dirt. Clean up spills immediately.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

[CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Alternatively, pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling or reconditioning. If recycling is unavailable, puncture and dispose of container in a sanitary landfill, or by incineration.]

[CONTAINER DISPOSAL: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.]

EMERGENCY HANDLING: In case of contamination or decomposition, do not reseal container. Isolate in an open, well-ventilated area. Flood with large volumes of water. Cool unopened drums in vicinity by water spray.

WARRANTY: Seller expressly warrants that the product conforms to its chemical description. There are no warranties associated with the sale of the product either expressed or implied including, but not limited to, the warranties of fitness for a particular purpose or use.

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Alternate Brand Name:

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

[† Not approved for use in California]

[METHOD OF APPLICATION PurDOX BCD is a precursor for the generation of chlorine dioxide and must be used with a suitable chlorine dioxide generator. [DO NOT ADD PurDOX BCD directly to the system being treated.] Add the generated chlorine dioxide solution to a point in the system which ensures uniform mixing. Your International Dioxide, Inc. representative can guide you in the selection, installation and operation for the feed systems.]

[Drinking Water Treatment

This product can be used to disinfectant drinking water in municipal and public water systems. A generated dosage of chlorine dioxide between 0.5 to 5 ppm on a continuous basis is adequate to provide disinfection that complies with the National Drinking Water Regulations in 40 CFR Part 141 and state drinking water standards. In addition, the residual disinfectant and disinfectant by-products must comply with the regulations in 40 CFR Part 141.]

[[INDUSTRIAL PROCESS WATER USES:

This product is approved for the control of microbial, algal, and mollusk populations in industrial process or waste water at the sites listed below. The dosage of chlorine dioxide required is dependent on the specific use; see specific directions below. PurDOX™ BCD may be used to treat the following aquatic sites:]

[Recirculating Cooling Water Towers

To control microbial and algal slime in recirculating cooling water systems, an intermittent or continuous application may be used. If using continuous feed, maintain residual chlorine dioxide concentrations between 0.1 – 1.0 ppm. If using intermittent feed, maintain a residual concentration of 0.1 – 5.0 ppm. Chlorine dioxide must be added to drip pan, cold-water well, or other points where adequate mixing and uniform distribution can occur.]

[Once-Through Cooling Water Towers

To remove adult mollusks in once-through cooling water systems, an intermittent dose of 0.2-25 ppm is necessary; the exact dose is dependent on the infestation present. If a continuous dose is preferred, apply chlorine dioxide at rates that maintain 0.25-2 ppm in the cooling water. To prevent settling and attachment of the free swimming larvae or mollusks (veligers), apply a continuous feed to achieve a residual of 0.1-0.5 ppm. Chlorine dioxide must be added to drip pan, cold-water well, or other points where adequate mixing and uniform distribution can occur.]

[Textile processing water and pulp and paper process water

To control microorganisms that form slime in paper process water and that cause blockages of paper mill equipment, and to oxidize slime buildup already present, chlorine dioxide may be applied in an intermittent or continuous dose. Either method of application must maintain a residual concentration of 0.1 – 5.0 ppm of chlorine dioxide in the paper process water. If the system is badly fouled, it must be cleaned prior to treatment with chlorine dioxide. This product can be used as a slimicide for process water used in the manufacture of food-contact paper and paperboard.]

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[Pasteurizer, cannery and retort water systems:

To control odor and reduce bacterial slime in cooling and warming waters such as canning, retort, and pasteurizer process water, chlorine dioxide may be added intermittently to achieve a dose of 0.4 ppm.]

[Impounded lake, pond and reservoir water, including industrial waste water

To control microorganisms and algae that cause unacceptable odors and slime, these aquatic sites may be treated with chlorine dioxide on an intermittent basis. Sufficient chlorine dioxide must be added to reach a residual concentration of 5 ppm, in order to achieve adequate control of odor and slime caused by algae and microorganisms.]

[Sewage and wastewater systems

For (disinfection/sanitization) of sewage and wastewater, add chlorine dioxide to achieve a residual of up to 5 ppm. To control odors caused by sulfides associated with sewage and wastewater, a minimum of 5.2 ppm chlorine dioxide must be applied to oxidize 1 ppm sulfide (measured as total sulfide) if the pH is between 5-9. A minimum of 1.5 ppm chlorine dioxide will oxidize 1 ppm phenol if the pH is less than 8; if the pH is greater than 10, a minimum of 3.5 ppm chlorine dioxide is required.]

[[†] Gas and oil recovery injection water, fracturing system fluids

To control sulfate reducing bacteria that form colloidal sulfur or iron sulfides, and to oxidize sulfides, a continuous or intermittent application of chlorine dioxide may be used. If using a continuous feed of chlorine dioxide, apply it at rates slightly higher than the sulfide oxidative demand, as determined by a sulfide demand study. If using an intermittent feed, apply a shock dose of 200-3000 ppm chlorine dioxide. Please be certain that this product is not discharged into lakes, streams, ponds, oceans or other waters.]

[[†] Ultrasonic tank water, photo processing wash water, and leather processing solutions

To control slime caused by microbial populations in these liquid systems, a residual chlorine dioxide concentration between 0.25 to 5.0 ppm is necessary. Chlorine dioxide may be added intermittently, or on a continuous basis to achieve the desired residual; the concentration maintained is dependent on individual systems.]]

[Agricultural Water Uses (Non-Food Contact)

PurDOX™ BCD is approved for use in the control of odor-causing microbial populations in water for the following agricultural non-food contact uses: Drinking water treatment for animals not meant for human consumption (e.g., show and research animals, animals raised for fur to wool; horses, mules or donkeys). Treatment of drinking water tanks for livestock not meant for human consumption can be achieved by intermittent or continuous application of chloride dioxide. Either method must be monitored, to achieve a residual concentration between 1.0 – 2.0 ppm chlorine dioxide.]

[This product also may be used to generate chlorine dioxide for non-pesticidal uses such as:

- [Oxidizing nutrients]
- [Reducing sludge]
- [Eliminating odors]
- [Clarifying/precipitating organic and inorganic particles]
- [Controlling scale & deposits]

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Alternate Brand Name:

- [Reducing TOC (Total Organic Carbon)]
- [Controlling iron & manganese]
- [Reducing color]
- [Controlling corrosion]
- [Destruction of odors caused by phenolics, simple cyanides, and sulfides by chemical oxidation]]

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Alternate Brand Name:

{OPTIONAL LOGOS/MARKINGS/3rd Party Certifications}



{OPTIONAL MARKETING CLAIMS}

- [Chlorine dioxide is an effective biocide against microbial and algal slime in challenging water conditions in recirculating cooling water towers.]
- [Chlorine dioxide is an effective biocide against adult mollusks in challenging water conditions in once through cooling water towers.]
- [Chlorine dioxide is an effective biocide against microorganisms that form slime in challenging water conditions in textile processing water.]
- [Chlorine dioxide is an effective biocide against microorganisms that form slime in challenging water conditions in paper process water.]
- [Chlorine dioxide is an effective biocide against bacterial slime in challenging water conditions in pasteurizer[, cannery] [and] [, retort water systems].]
- [Chlorine dioxide is an effective biocide against microorganisms and algae that cause unacceptable odors and slime in challenging water conditions in [impound lake water] [,] [pond water] [,][reservoir water] [,] [and] [industrial waste water].]
- [Chlorine dioxide is an effective biocide against slime caused by microbial populations in challenging water conditions in [gas and oil recovery injection water] [and] [fracturing system fluids].]
- [Chlorine dioxide generated from PurDOX™ BCD is effective at pH greater than 7.]
- [Chlorine dioxide generated from PurDOX™ BCD is effective at pH between 3-10.]
- [Chlorine dioxide generated from PurDOX™ BCD efficacy is not impacted in the pH range of 3-10.]
- [The efficacy of chlorine dioxide generated from PurDOX™ BCD is unaffected by ammonia, oil or organic contamination in cooling water or drinking water systems.]
- [Because the use of chlorine dioxide generated from PurDOX™ BCD allows for lower usage rates to maintain control of the system, it reduces the copper corrosion rates.]
- [Copper corrosion potential can be reduced by using chlorine dioxide generated from PurDOX™ BCD .]
- [Chlorine dioxide generated from PurDOX™ BCD reduces corrosion potentials, helping to expand the life of assets such as condensers and cooling towers.]
- [Chlorine dioxide generated from PurDOX™ BCD penetrates, removes, controls or prevents microbial slime in recirculating cooling towers, pasteurizer, cannery or retort water, textile or pulp and paper water, impound lakes, ponds or reservoir water including industrial waste water.]

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Alternate Brand Name:

- [Chlorine dioxide generated from PurDOX™ BCD can help remove, control or prevent microbial slime in recirculating cooling towers, pasteurizer, cannery or retort water, textile or pulp and paper water, impound lakes, ponds or reservoir water including industrial waste water.]
- [As a dissolved gas, chlorine dioxide penetrates and removes microbial slime, helping to recover the performance of your heat exchangers (condenser and cooling tower).]
- [Replacing Cl₂ with chlorine dioxide generated from PurDOX™ BCD can decrease the micro-fouling and increase the flow rate through the condenser.]
- [Replacing Cl₂ with chlorine dioxide generated from PurDOX™ BCD can decrease the micro-fouling and improve the pressure drop in the condenser.]
- [Chlorine dioxide generated from PurDOX™ BCD helps clean and loosen slime debris from recirculating cooling tower surfaces, pasteurizer, cannery or retort water surfaces, textile or pulp and paper water surfaces, impound lakes, ponds or reservoir water including industrial waste water.]
- [Chlorine dioxide generated from PurDOX™ BCD reduces the need for corrosion inhibiting chemicals in cooling water applications.]
- [Chlorine dioxide generated from PurDOX™ BCD improves filter operation.]
- [Chlorine dioxide generated from PurDOX™ BCD is effective against adult and veliger forms of mussels including zebra mussels.]
- [Addition of chlorine dioxide generated from PurDOX™ BCD to the cooling water does not form corrosive byproducts. Corrosion of copper metal surfaces is not accelerated by biocide treatment.]
- [When used as directed, chlorine dioxide generated from PurDOX™ BCD is available for microbiological control in cooling water rather than being consumed by inorganic-reducing substances in the cooling water.]
- [When used as directed, chlorine dioxide generated from PurDOX™ BCD is available for microbiological control in drinking water rather than being consumed by inorganic-reducing substances in the drinking water.]
- [Surface-active properties of Chlorine dioxide generated from PurDOX™ BCD provide a cleansing action that minimizes under-deposit corrosion. This means improved heat transfer and lower operating costs.]
- [Effective for use in hard waters at low use concentrations, which means that chlorine dioxide generated from PurDOX™ BCD is a cost-effective microbiological treatment in cooling water to complement water and cost savings associated with operating at high cycles of concentration.]